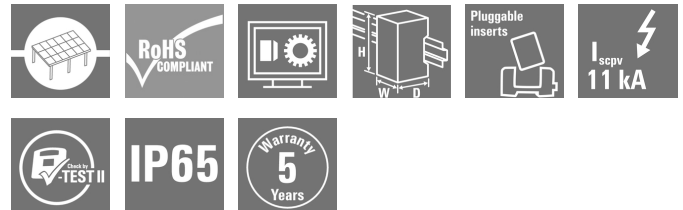


PVN DC 2I 1O 1MPP SPD1R WM4 11**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

PV Next combiner boxes for inverters with 1 to 12 MPP trackers are used to protect the DC side of a photovoltaic system. The combiner boxes protect the inverter against overvoltages and thus comply with the European Directive EN 51543-32. In addition, these products offer the possibility to protect the system against reverse currents and the possibility to combine strings to save cables during installation.

General ordering data

| | |
|-------------------|--|
| Version | Photovoltaics, Combiner Box, 1100 V, 1 MPP, 2 Inputs / 1 Output per MPP, Surge protection I / II, WM4C |
| Order No. | 2791920000 |
| Type | PVN DC 2I 1O 1MPP SPD1R WM4 11 |
| GTIN (EAN) | 4064675072966 |
| Qty. | 1 pc(s). |
| Replacement parts | 2530530000 |

PVN DC 2I 10 1MPP SPD1R WM4 11

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Technical data

Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Depth | 132 mm | Depth (inches) | 5.197 inch |
| Height | 234 mm | Height (inches) | 9.213 inch |
| Width | 200 mm | Width (inches) | 7.874 inch |
| Net weight | 1,660 g | | |

Temperatures

| | | | |
|---------------------|-----------------|----------|---------------------------|
| Ambient temperature | -40 °C...+50 °C | Humidity | 5...95 %, no condensation |
|---------------------|-----------------|----------|---------------------------|

Approvals and norms

| | |
|-----------|-------------------------|
| Approvals | EN 61439-2, IEC 61439-2 |
|-----------|-------------------------|

Guarantee

| | |
|---------------|---------|
| Time interval | 5 years |
|---------------|---------|

Electrical characteristics

Current per Maximum Power Point, max. 30 A

| | | |
|-------------------------------------|--------------------------|--------|
| Rated DC current per connection | Current per string, max. | 30 A |
| Rated short-term current resistance | Rated current | 37.5 A |
| Rated DC voltage | 1,100 V | |

Enclosure

| | | | |
|-------------------------------|--|----------------------|--|
| Connection type string | Plug WM4C | Enclosure attachment | Via mounting feet |
| Impact resistance | IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262 | Insulating material | Polycarbonate, Polyester glass-fibre reinforced, Polycarbonate |
| Switch disconnecter execution | no switch | Type of mounting | Wall mounting, 4 screws |

General data

| | | | |
|-----------------------|---------------------------------------|-------------------|------|
| Installation location | Protected outdoor area (Land and Sea) | Protection degree | IP65 |
|-----------------------|---------------------------------------|-------------------|------|

Inputs

| | | | |
|--------------------------------|-----------------|---|--|
| Amount of maximum power points | 1 MPP | | |
| DC Input + & - | Wire connection | Type of connection | WM4C plug-in connector |
| | | Compatible cable cross-section | EN 50618:2015 |
| | | Wire cross-section, min. | 4 mm ² |
| | | Wire cross-section, max. | 6 mm ² |
| Functional earth connector | Cable entry | Number of cable entries | 1 |
| | | Type of connection | Tension clamp connection with actuator |
| | Wire connection | Flexible, max. H05(07) V-K | 25 mm ² |
| | | w. wire end ferrule, DIN 46228 pt 1, max. | 16 mm ² |

Creation date April 27, 2024 11:46:55 PM CEST

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Technical data

| | | | |
|------------------------------------|--|---|--|
| Fuse type | Neither fuse cartridge nor holder | | |
| Max. number of DC inputs | per Maximum Power Point 2 inputs connected in parallel | | |
| Surge protection auxiliary contact | Cable entry | Number of cable entries | 1 |
| | Wire connection | Type of connection | Tension clamp connection with actuator |
| | | Flexible, max. H05(07) V-K | 1.5 mm ² |
| | | w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm ² |

Outputs

| | | | |
|-----------------|-----------------|--------------------------------|------------------------|
| DC Output + & - | Wire connection | Type of connection | WM4C plug-in connector |
| | | Compatible cable cross-section | TÜV 2 Pfg 1169/08.07 |
| | | Wire cross-section, min. | 4 mm ² |
| | | Wire cross-section, max. | 6 mm ² |

Max. number of DC outputs per Maximum Power Point 1 output

Surge protection DC side

| | | | |
|--|---------------|--|---------------|
| Discharge current I_n (8/20 μ s) | 20 kA | Discharge current, max. (8/20 μ s) | 40 kA |
| Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE | 1,100 V | PV system voltage, max. U_{cpv} | 1,100 V |
| Protection level U_p (+/-) | ≤ 3.8 kV | Protection level U_p (+/PE) | ≤ 3.8 kV |
| Protection level U_p (-/PE) | ≤ 3.8 kV | Requirements class | Type I/II |
| Short-circuit current I_{SCPv} | 11,000 A | Total discharge current I_{total} (8/20 μ s) | 50 kA |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002928 | ETIM 7.0 | EC002928 |
| ETIM 8.0 | EC003857 | ETIM 9.0 | EC003857 |
| ECLASS 9.0 | 22-57-92-03 | ECLASS 9.1 | 22-57-02-90 |
| ECLASS 10.0 | 22-57-02-90 | ECLASS 11.0 | 22-57-02-92 |
| ECLASS 12.0 | 22-57-02-92 | ECLASS 13.0 | 22-57-02-92 |

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www.weidmueller.com**Technical data****Tender specification sheets**

Long specification

Combiner box for inverters with 1 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32.

MPP1:

2 inputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

1 output, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

Max. string voltage Uoc: 1100V

1 class/type I + II combined arrester with signal contact

Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm²

Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm²

Protection class: IP65

All built into a glas fibre reinforced polyester housing. Dimensions HxWxD: 234x200x132 mm

Approval according to low voltage switchgear and controlgear IEC 61439-1:2011 and EN 61439-2:2011

Approvals

Approvals



PVN DC 2I 10 1MPP SPD1R WM4 11

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

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www.weidmueller.com

Technical data

Downloads

Approval/Certificate/Document of Conformity

[PV Next Mini EU Declaration of Conformity](#)

Engineering Data

[CAD data – PV NEXT Mini WM4 C Step](#)[CAD data – STEP](#)[Application notes – Schematic Diagram for PV Next Mini](#)

Technical Documentation

[Customer drawing](#)[2932700000_00_03-2023_DRILL-TEMP_PV-Next_20-20](#)

User Documentation

[Manual PV Next String Combiner Box](#)[MANUAL PV NEXT IT/ES/FR](#)[Instruction leaflet PV NEXT MINI DE/EN](#)[Instruction leaflet PV NEXT MINI](#)

White paper

[Fact Sheet DE PV CB Wie man Gebäude gegen Blitzeinschläge schützt](#)[Fact Sheet DE PV Wie man die Lebensdauer eines GAK verlängert](#)[Fact Sheet DE PV CB Wann Sicherungen zu installieren sind](#)[Fact Sheet DE CB PV NEXT](#)[Fact Sheet EN PV CB When DC fuses are mandatory to install](#)[Fact Sheet EN CB PV NEXT](#)[Fact Sheet EN PV How to protect buildings against lightning strikes](#)[Fact Sheet EN PV How to extend the life time of a Combiner Box](#)[Fact Sheet DE CB PV Strings kombinieren](#)[Fact Sheet DE PV CB Richtig verbinden](#)[Fact Sheet EN CB Combining PV strings](#)[Fact Sheet EN PV CB connection](#)[Fact Sheet EN PV Combiner Box earthing](#)[Fact Sheet DE PV Combiner Box Erdung](#)

Catalogues

[Catalogues in PDF-format](#)

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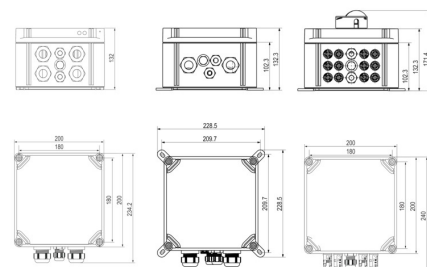
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Drawings

PCB design



| PVN 1 M2 I6 S0 F3 V1 Q1 TX PX 10 | | | | | | | | | |
|----------------------------------|--|----------------|--|-----------------------|--|-------------------|--|--------------------|--|
| Series | | Voltage | | Power supply | | Monitoring | | Output Type | |
| PVN = PV Next | | 10 = 1kV | | x = n/a | | 0 = n/a | | 0 = GG | |
| VPU = PV Protect | | 11 = 1.1kV | | x = n/a | | 1 = VMAAC | | 1 = TYP I-II | |
| Level | | SPD | | Fuses | | Switch | | Inputs | |
| 1 = DC trunk box (L1) | | X = No SPD | | 3 = only fuse holders | | x = n/a | | 1...12 inputs | |
| Series | | SPD | | Switch | | Inputs | | Switch | |
| 1 = 1 MPP supported | | 0 = TYP II | | 0 = manual switch | | 1...12 inputs | | 1 = remote switch | |
| 2 = 2 MPP supported | | 1 = TYP I-II | | 1 = remote switch | | 1...12 inputs | | | |
| 3 = 3 MPP supported | | X = No SPD | | | | | | | |
| 4 = 4 MPP supported | | | | | | | | | |
| 6 = 6 MPP supported | | | | | | | | | |



PVN DC 2I 10 1MPP SPD1R WM4 11**Weidmüller Interface GmbH & Co. KG**

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www.weidmueller.com**Accessories****External fixing lugs**

External attachment lugs 4-part set

**General ordering data**

| | | |
|------------|----------------------------|---|
| Type | MF FPC | Version |
| Order No. | 9536040000 | FPC (polycarbonate empty enclosure), Mounting foot, Fixing lugs, |
| GTIN (EAN) | 4032248009442 | Height: 40 mm, Width: 19 mm, Depth: 35.5 mm, Material: Polyamide, |
| Qty. | 1 pc(s). | Light Grey |

Cutting tools

Cutting tools for conductors up to 8 mm, 12 mm, 14 mm and 22 mm outside diameter. The special blade geometry allows pinch-free cutting of copper and aluminium conductors with minimum physical effort. The cutting tools (KT 8 to KT 22) also come with VDE and GS-tested protective insulation up to 1,000 V in accordance with EN/IEC 60900.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | KT 14 | Version |
| Order No. | 1157820000 | Cutting tools, Cutting tool for one-hand operation |
| GTIN (EAN) | 4032248945344 | |
| Qty. | 1 pc(s). | |

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www.weidmueller.com**Accessories****Accessories**

The dust protection cap "Dustcap VSSO" protects the Weidmüller and type 4 solar connectors against dust and dirt.

The "SafetyClip" protects the Weidmüller solar connectors against unintentional opening and can only be released using the special multi-tool.

General ordering data

| | | |
|------------|----------------------------|----------------------------|
| Type | VSSO WM4 C | Version |
| Order No. | 1254870000 | Photovoltaics, Flat design |
| GTIN (EAN) | 4050118047479 | |
| Qty. | 100 pc(s). | |

Tools

- For flexible and solid conductors with special insulating materials
- High-quality stripping for industrial applications (complies with aircraft industry requirements)
- Specially shaped blades enable stripping of special types of insulation and conductor configurations
- Stripping length adjustable via end stop
- Very versatile thanks to interchangeable stripping units
- Stripping results reproduced accurately over and over again
- No damage to the conductor
- A long-lasting, reliable tool thanks to its sturdy design
- Integrated cutting function

General ordering data

| | | |
|------------|----------------------------|----------------------------------|
| Type | MULTI-STRIPAX PV | Version |
| Order No. | 1190490000 | Photovoltaics, Plug-in connector |
| GTIN (EAN) | 4032248973262 | |
| Qty. | 1 pc(s). | |

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Accessories

Crosshead screwdriver Phillips



VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

General ordering data

| | | |
|------------|----------------------------|--|
| Type | SDIK PH3 X 150 | Version |
| Order No. | 2749910000 | Screwdriver, Blade width (B): 3 mm, 150 mm, Blade thickness (A): 3 |
| GTIN (EAN) | 4050118897210 | |
| Qty. | 1 pc(s). | |

PV-Stick field connectors



Faster is better. This also applies to the cabling of solar systems. Our handy connectors stay firmly in your grip even in frosty temperatures and can be installed very quickly and easily without a crimping tool.

You don't need crimp contacts and crimping tools and you avoid assembly errors. This saves up to 50% installation time – without affecting quality. The new photovoltaic connectors are TÜV-approved and comply with IEC 62852.

Our "PUSH IN" technology enables safe connections with minimal effort – insert, turn: current!

- 1.500 V DC (DE) / 1,500 V DC (EN)
- PUSH IN technology
- Standard-compliant quality in accordance with IEC 62852
- Ergonomic, prize-winning design
- Fastest PV connector currently available
- Reliable latching

General ordering data

| | | |
|------------|----------------------------|--|
| Type | PV-STICK- VPE10 | Version |
| Order No. | 1303490000 | Photovoltaics, Plug-in connector, PUSH IN connection, male |
| GTIN (EAN) | 4050118102529 | |
| Qty. | 10 pc(s). | |

| | | |
|------------|----------------------------|--|
| Type | PV-STICK+ VPE10 | Version |
| Order No. | 1303450000 | Photovoltaics, Plug-in connector, PUSH IN connection, female |
| GTIN (EAN) | 4050118102468 | |
| Qty. | 10 pc(s). | |

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Accessories

UV-resistant cable ties

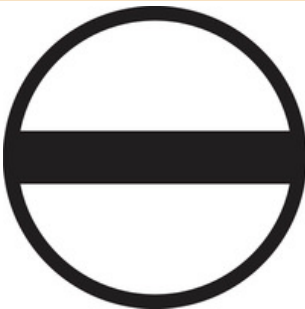


UV-resistant polyamide 6.6 ensures long durability of our special cable ties even with strong UV radiation. Ideal for continuous outdoor use.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | CB-UVR 290/4,5 BK | Version |
| Order No. | 2659350000 | Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N |
| GTIN (EAN) | 4050118682816 | |
| Qty. | 100 pc(s). | |

Slotted screwdriver



VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDIS 1.0X5.5X125 | Version |
| Order No. | 2749850000 | Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade thickness (A): 1 mm |
| GTIN (EAN) | 4050118897050 | |
| Qty. | 1 pc(s). | |
| Type | SDIS 0.6X3.5X100 | Version |
| Order No. | 2749810000 | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm |
| GTIN (EAN) | 4050118897012 | |
| Qty. | 1 pc(s). | |

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www.weidmueller.com**Accessories****Y-Connector Cables**

The Y or X cable is used to connect three or four elements of a PV system, such as the connection between PV panels, inverters and surge protection boxes. The cables are available in different connection variants.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | PVHYM-M-XXXX6W+15 | Version |
| Order No. | 2877850000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male, |
| GTIN (EAN) | 4064675666417 | 6mm², 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHYM+M+XXXX6W-15 | Version |
| Order No. | 2877860000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female, |
| GTIN (EAN) | 4064675666424 | 6mm², 1500 V |
| Qty. | 1 pc(s). | |

PV Sun Covers**General ordering data**

| | | |
|------------|----------------------------|---------------|
| Type | PV SUN COVER 30/19/18 | Version |
| Order No. | 8000086576 | Photovoltaics |
| GTIN (EAN) | 4064675845164 | |
| Qty. | 1 pc(s). | |

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www.weidmueller.com**Replacement parts****Spare Arrester****General ordering data**

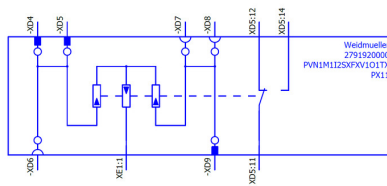
| | | |
|------------|----------------------------|--|
| Type | VPU PV I+II O 1000 E | Version |
| Order No. | 2530530000 | Surge voltage arrester, Low voltage, Accessories, Surge protection I / |
| GTIN (EAN) | 4050118540741 | II, Spare arrester |
| Qty. | 9 pc(s). | |

PVN DC 2I 10 1MPP SPD1R WM4 11

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Drawings



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